# Contact Lenses

## The Ophthalmologist's Role in Prescription

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• **It is the responsibility of ophthalmologists to determine which patients can suitably use contact lenses, to instruct them in care and use of the lenses, to write the prescription and to check the fitting, vision and tolerance of the eyes to avoid injury. This very important component of eye care should not be given over to nonmedical technicians by default.**

PATIENTS' ACCEPTANCE of corneal lenses has increased significantly in the past several years and they are used successfully by a high proportion of persons for whom they are prescribed. Contributing to this progress have been improvement of design, permitting lightness, better fitting and increased tolerance for the lenses, overcoming the "veiling" effect that once was a deterrent and, above all, the fact that the use of fluids is no longer necessary. The greatest impetus for contact lens use, however, has come from the persistent promotional campaign of advertising. A quarter of a million dollars was spent for newspaper advertising of contact lenses last year in Northern California.

Owing to general apathy by the medical profession toward contact lenses, nonmedical technicians have practically taken over this phase of eye care. It is only within the last year or so that California has required a license to fit corneal lenses, and this is not retroactive to include persons who were already fitting them when the law was passed. It is estimated that contact lenses are being prescribed at a rate of about a million per year, and that only 15 to 20 per cent of them are being fitted by physicians.

Not only have ophthalmologists in general been disinterested in corneal lenses, many have actively aspersed them.

What are the reasons for this resistance by physicians? My confreres tell me of several. (1) They are afraid of eye injury. And yet I have observed patients who have worn corneal lenses for six or seven years without any evidence of injury to the cornea and I know of no reported case of permanent damage from the wearing of a contact lens. (2) They believe that too high a number of patients cannot tolerate contact lenses. Yet a recent review showed that over 90 per cent of persons fitted with contact lenses who answered a questionnaire said they were wearing them most of the working day. (3) Some ophthalmologists feel that they may lessen their professional standing by prescribing lenses that are promoted, championed—and oversold—by technicians. Some ophthalmologists are just too busy to take on more chores with doubtful promise. The attitude reflected in these views has the effect of depriving many patients of the real benefits that may be achieved only with corneal lenses.

It seems that ophthalmology must accept the fact that contact lenses are here to stay, that they can be very rewarding to patients, and that it is the responsibility of the ophthalmologist to supervise the fitting and prevent harm to the eye. Further research by the medical profession will result in added improvements.

Ophthalmologists should be aware that in addition to the cosmetic gains of corneal lenses, there are many medical reasons for their being prescribed.

1. In keratoconus, superior vision may be achieved with contact lenses, and the progress of the disease may well be retarded or halted by use of them.

2. In cases of severe refractive errors, such as astigmatism and high myopia, much better vision may be possible with corneal lenses.

3. In persons with high degrees of anisometropia, a real binocular comfort may be achieved for the first time. The possibility of using both eyes together after a monocular cataract extraction has changed much of our thinking about advising such one sided operation. Now there is a real visual reward for such a procedure.

4. Paralytic keratitis is reported to be benefited by the use of protective contact lenses.

5. In patients with subnormal vision, due to corneal scarring, corneal dystrophy, albinism, aniridia and nystagmus, vision may be greatly benefited.

6. The correction of presbyopia by under-correcting the myopia or over-correcting the hypermetropia monocularly has been useful in selected cases. I have been gratified by this arrangement for my own eyes for the past three years. I have worn a +175 corneal

Presented as part of a discussion on Contact Lenses given before the Section on Eye at the 89th Annual Session of the California Medical Association, Los Angeles, February 21 to 24, 1960.

lens on my left eye for reading, and used my unaided right eye for distance. Contact bifocals have been disappointing to me, although such a development seems like a natural evolution.

7. Patients with allergic sensitivity to the material used in making spectacle frames, or with other facial dermatitis, may get great relief by the use of corneal lenses in place of regular glasses.

8. Some patients with low degrees of muscle imbalance have been helped enough by corneal lenses to permit them to abandon corrective prisms. Since the lenses have no prism effect, it is probable that this astonishing phenomenon is due to the fact that corneal lenses remove peripheral astigmatism, thereby helping peripheral fusion, which in turn reinforces central fusion.

Ophthalmologists should be aware of some contraindications to the use of contact lenses. It is probably wrong to prescribe contact lenses for patients who have recurrent erosion of the cornea or history of symptoms suggesting this diagnosis, or for those with a pterygium or a fleshy pingueculum that is encroaching on the corneal margin, or chronic blepharo-conjunctivitis, active keratitis or allergic conjunctivitis. In general, patients with a bad tremor or a mental problem or moderate nervousness should not have contact lenses. Another group is made up of patients who, lacking motivation or real reward from their use, probably would not be benefited enough to justify contact lenses. In my experience, patients who do not feel a need for conventional eyeglasses most of their waking hours, or who are not convinced that contact lenses would please them, should not be persuaded to try them. Also, I have avoided prescribing contact lenses for children unless they have demonstrated unusual stability and judgment and respect for personal property, but there is a report in the literature of a 7-year-old child who was fitted with a contact lens for monocular aphakia.

The claim that contact lenses arrest or retard the progress of myopia is unfounded. Usually the myopia has ceased to progress anyway by the time these lenses are fitted. In most cases of near-sightedness axial lengthening is the cause of increasing myopia, and the wearing of a corneal lens can have no effect on the process. In some patients with a low degree of myopia, however, increments in myopia may be due to increases in the corneal curvature. This increase may be corrected by wearing a contact lens, which serves in lieu of the corneal face as a refracting surface. When the lens is removed, however, the corneal face returns to its increased curvature, and an additional minus correction is needed.

Certain advice should be given patients who are about to get contact lenses. One thing is that after a few hours of wearing contact lenses they will not be able to see as well with their conventional glasses as they had before. This is a temporary change, depending upon how long the lenses were worn, and is due to a change in the corneal curvature. (It takes about 72 hours for my own K reading* and visual acuity to return to normal.) Another thing that patients should be told is that contact lenses should take the place of regular lenses for most uses, for not many will achieve comfort if they wear their contact lenses irregularly or infrequently. Advising about cleanliness is of utmost importance. Hands should be washed well with soap and water before the lenses are handled, and one must avoid touching the lens with grease, oil or cosmetics. If the lens is exposed to greases, it may be cleaned with lighter fluid, washed well with soap and water and placed in a soaking solution for several hours. When the lenses are removed from the eyes, they should be washed well with water and immersed in a container of the solution. As the plastic material of which lenses are made is wetted with great difficulty, a wetting agent must be used to increase the wetness of the surface. Although saliva is an excellent wetting agent, using it must be forbidden because of its contaminants. When the patient is learning to wear contact lenses, he should not increase the wearing time each day by more than a half hour over the time they were worn the previous day. I have observed several cases in which corneal abrasions resulted from over-zealous early wearing before tolerance was achieved. In such cases, pain does not develop until several hours after the lenses have been removed, owing to a reduction in corneal sensitivity induced by wearing the lenses. The patient should be instructed to return to the ophthalmologist for observation after wearing the lenses for four hours. At this time the vision is examined but the prescription is not changed, unless it is grossly in error. The fit of the lenses should be determined by instilling fluorescein and viewing the eyes with a slit lamp under a cobalt blue light. A central pooling of fluorescein, or the presence of air trapped beneath the lens, indicates the curvature of the corneal lens is too sharp. Too little fluorescein beneath the lens indicates it is too flat. A flat lens tends to abrade the cornea and to slide off position very easily. Any surface abrasions of the cornea should be noted and the technician who prepares the lenses should be advised as to the observation. The patient should be seen again in two weeks for further observation, and at this time, if the lens is settled well against the cornea, mild changes in the prescription may be made to improve vision. The patient should then be observed at monthly intervals for the next four months.

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*Keratometer reading of flattest corneal curvature.